

L245 of SEQ ID NO:4.

18. (New) The polynucleotide of claim 14, wherein said polypeptide fragment spans amino acids V118 and L245 of SEQ ID NO:4.

19. (New) The polynucleotide of claim 14, wherein said polypeptide fragment comprises amino acids 237 to 267 of SEQ ID NO:4.

20. (New) The polynucleotide of claim 14, wherein said polypeptide fragment has biological activity.

21. (New) The polynucleotide of claim 20, wherein said biological activity is carboxypeptidase activity.

22. (New) The polynucleotide of claim 20, wherein said biological activity is inhibition of carboxypeptidase activity.

23. (New) The polynucleotide of claim 14, wherein said polynucleotide consists of nucleotides 39 to 920 of SEQ ID NO:3, or is a fragment thereof.

24. (New) The complement of a polynucleotide, wherein said polynucleotide consists of nucleotides 825 to 1057 of SEQ ID NO:3, or a fragment of said complement.

25. (New) An expression vector comprising the polynucleotide of claim 14, operably linked to a promoter.

26. (New) A composition comprising the polynucleotide of claim 14 and a physiologically acceptable carrier.

27. (New) A host cell recombinant for the polynucleotide of claim 14.

28. (New) A non-human transgenic animal recombinant for the polynucleotide of claim 14.

29. (New) An isolated polynucleotide comprising an open reading frame of the human cDNA of

of deposited clone 1000848582_181-40-4-0-A11-F.

30. (New) An SCPhx polypeptide encoded by the polynucleotide of claim 29.
31. (New) An SCPhx polypeptide consisting of amino acids -26 to 267 of SEQ ID NO:4, or a polypeptide fragment thereof.
32. (New) The polypeptide fragment of claim 31, wherein said polypeptide fragment consists of amino acids 1 to 267 of SEQ ID NO:4.
33. (New) The polypeptide fragment of claim 31, wherein said polypeptide fragment comprises amino acids 1 to 267 of SEQ ID NO:4.
34. (New) The polypeptide fragment of claim 31, wherein said polypeptide fragment spans amino acid L245 of SEQ ID NO:4.
35. (New) The polypeptide fragment of claim 31, wherein said polypeptide fragment spans amino acids V118 and L245 of SEQ ID NO:4.
36. (New) The polypeptide fragment of claim 31, wherein said polypeptide fragment comprises amino acids 237 to 267 of SEQ ID NO:4.
37. (New) The polypeptide fragment of claim 31, wherein said polypeptide fragment has biological activity.
38. (New) The polypeptide fragment of claim 37, wherein said biological activity is carboxypeptidase activity.
39. (New) The polypeptide fragment of claim 37, wherein said biological activity is inhibition of carboxypeptidase activity.
40. (New) A composition comprising the polypeptide of claim 31 and a physiologically acceptable carrier.

41. (New) A method of making an SCPhx polypeptide, said method comprising:
- a) providing a population of cells comprising a polynucleotide encoding the SCPhx polypeptide of claim 31, operably linked to a promoter;
 - b) culturing said population of cells under conditions conducive to the production of said polypeptide within said cells; and
 - c) purifying said polypeptide from said population of cells.
42. (New) The method of claim 41, wherein said polynucleotide consists of nucleotides 39 to 920, or is a fragment thereof.
43. (New) An antibody that specifically binds to the polypeptide of claim 31.
44. (New) The antibody of claim 43, wherein the specific binding of said antibody to said polypeptide depends on the presence of one or more of amino acids 237 to 267 of SEQ ID NO:4 within said polypeptide.
45. (New) The antibody of claim 43, wherein said specific binding depends on the presence of amino acid L245 of SEQ ID NO:4 within said polypeptide.
46. (New) The antibody of claim 43, wherein said antibody neutralizes carboxypeptidase activity.
47. (New) A method of binding the polypeptide of claim 31 to the antibody of claim 43, comprising contacting said antibody with said polypeptide under conditions in which said antibody can specifically bind to said polypeptide.
48. (New) A method of detecting a SCPhx gene product in a biological sample comprising the steps of:
- a) obtaining said biological sample from a mammal;
 - b) contacting said biological sample with the antibody of claim 44; and
 - c) detecting the presence or absence of binding of said antibody to a protein within said sample;
- wherein a detection of said binding indicates that SCPhx gene product is expressed in said biological sample.

49. (New) A method of determining whether SCPhx gene is expressed in a biological sample, comprising the steps of:

- a) obtaining said biological sample from a mammal;
- b) contacting said biological sample with the polynucleotide of claim 24; and
- c) detecting the presence or absence of hybridization between said polynucleotide and an RNA species within said sample;

wherein a detection of said hybridization indicates that SCPhx gene is expressed in said biological sample.

50. (New) The method of claim 49, wherein said polynucleotide is a primer, and wherein said hybridization is detected by detecting the presence of an amplification product comprising the sequence of said primer.

51. (New) A method of identifying a candidate modulator of an SCPhx polypeptide or polypeptide fragment, said method comprising:

- a) contacting the polypeptide or polypeptide fragment of claim 31 with a test compound; and
- b) determining whether said compound specifically binds to said polypeptide or polypeptide fragment;

wherein a detection that said compound specifically binds to said polypeptide or polypeptide fragment indicates that said compound is a candidate modulator of said SCPhx polypeptide or polypeptide fragment.

52. (New) A method for the production of a composition, comprising:

- a) identifying a candidate modulator of an SCPhx polypeptide or polypeptide fragment using the method of claim 51; and
- b) combining said modulator with a physiologically acceptable carrier.

53. (New) A method of using an SCPhx polypeptide fragment of claim 38 for the biosynthesis of a recombinant heterologous polypeptide, said method comprising:

- a) engineering said recombinant heterologous polypeptide to have a protective but inactivating C-terminal amino acid;
- b) expressing said engineered recombinant heterologous polypeptide;
- c) contacting said expressed engineered recombinant heterologous polypeptide with

said SCPhx polypeptide fragment; and

- d) removing of said inactivating C-terminal amino acid on said heterologous polypeptide by said SCPhx polypeptide fragment.

54. (New) A method of using an SCPhx polypeptide fragment of claim 38 to determine whether the C-terminal amino acid of a test polypeptide is required for the function of said test polypeptide, said method comprising:

- a) contacting said test polypeptide with said SCPhx polypeptide fragment;
- b) removing of said C-terminal amino acid by said SCPhx polypeptide fragment;
and
- c) determining that said C-terminal amino acid is required for said function if its removal reduces said function of said test polypeptide.